February 25, 2019

Mr. Peter Meertens
Central Coast Regional Water Quality Control Board
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

Comments re: Draft Imidacloprid Water Quality Criteria

Dear Mr. Meertens,

The Xerces Society for Invertebrate Conservation (Xerces) appreciates the opportunity to comment on the draft technical report for the derivation of imidacloprid water quality criteria prepared by the University of California, Davis (UC Davis) for the Central Coast Regional Water Quality Control Board (Central Coast Water Board). Xerces is an international nonprofit organization that protects wildlife through the conservation of invertebrates and their habitat. Xerces has extensive knowledge of aquatic invertebrates and their needs, and we have also reviewed the impacts of neonicotinoids on pollinators, aquatic invertebrates, and other species. In particular, we have examined imidacloprid contamination in California surface water and its potential effects on aquatic ecosystems, including in the Central Coast region. It is with this expertise that we offer comments.

Xerces applauds the Central Coast Water Board for undertaking the effort to derive imidacloprid water quality criteria for the region. Our examination of surface water imidacloprid detections throughout California identified several areas of concern in the state, especially watersheds in the Central Coast region.[1] Imidacloprid was found at levels that could kill aquatic invertebrates or cause sublethal harm. Neonicotinoid surface water contamination needs to be addressed to protect aquatic ecosystems and ensure that concentrations do not adversely affect beneficial uses.

The reviewed monitoring data from the Central Coast region on pages 20-21 of the draft document appears to be incomplete. Surface water monitoring data from the Department of Pesticide Regulation's Surface Water Database for 2010-2015 in the five counties noted (Monterey, San Benito (no samples), San Luis Obispo, Santa Barbara, and Santa Cruz) is summarized in Table 1. Sampling data shows that imidacloprid is often found in surface water throughout the region at levels that could cause harm to aquatic invertebrates. The monitoring data section in the final document should be revised to include all relevant samples from the region.

[1] Hoyle, S. and A. Code. 2016. Neonicotinoids in California's Surface Waters: A Preliminary Review of Potential Risk to Aquatic Invertebrates. *Xerces Society for Invertebrate Conservation.*

Table 1. Surface Water Imidacloprid Detections 2010-2015

County	# of Samples	# of Detections	Detection Frequency	Average Detection	High Detection
Monterey	218	178	82%	0.79 µg/L	6.8 µg/L
San Luis Obispo	24	17	71%	0.50 µg/L	1.12 µg/L
Santa Barbara	55	55	100%	1.62 µg/L	9.14 µg/L
Santa Cruz	9	4	44%	0.06 µg/L	0.07 µg/L

Overall, Xerces agrees with the methodology used to derive the imidacloprid criteria and we feel it is appropriately protective of aquatic invertebrates. However, we are concerned about the cumulative or synergistic toxicity risks from combinations with other insecticides that have similar modes of action. We appreciate that mixtures were considered in the draft document, and encourage you to address them as criteria are developed for similar systemic insecticides, especially the other nitroguanidine neonicotinoids.

We look forward to the criteria being peer-reviewed and adopted by the Central Coast Water Board in order to protect beneficial uses. Thank you for your consideration of these comments.

Sincerely,

Sarah Hoyle
Pesticide Program Specialist

Aimee Code
Pesticide Program Director